

Rhapsodies on a Cat-Piano, or Johann Christian Reil and the Foundations of Romantic Psychiatry

Robert J. Richards

Over all of this, a sublime group of speculative *Naturphilosophen* soars like an eagle. They assimilate their earthly booty into the purest ether and return it again as beautiful poetry.

—JOHANN CHRISTIAN REIL, *Rhapsodien über die Anwendung der psychischen Curmethode auf Geisteszerrüttungen*

At the beginning of the nineteenth century, a book on the treatment of insanity appeared, the analyses and prescriptions of which would help establish psychiatry as a modern discipline in Germany. The book was highly original and, even to an eye accustomed to the depths and shadows of the period, quite extraordinary. Consider, for example, the author's recommendation for treating a patient who, in constant reverie, could not fix attention on relevant external objects: the dreamer should be forced to listen to a piece played on a *Katzenclavier*—a cat-piano (fig. 1).

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FIG. 1.—An early emblem of a *Katzenclavier* (with a dog or two added), from Johann Theodor de Bry, *Emblemata Saecularia Mira et Iucunda Uarietate Saeculi Huius Mores Ita Expri-mentia Ut Sodalitatum Symbolis Insigniisque Conscribendis et Depingendis Peraccommoda Sint: Uersibus Latinis, Rhythymisque. Germanicis, Gallicis, Belgicis: Speciali Item Declamatione de Amore Exornata* (1596). The verse at the top of the illustration reads: “Come all, gather ’round and see who the most beautiful might be, / But count me in as well, for I am the bass of the choral company.” The inscription at the bottom reads: “There is no music sweeter to Midas’s ears.”

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One would first voice the instrument with suitable animals, which would then

be arranged in a row with their tails stretched behind them. And a keyboard fitted out with sharpened nails would be set over them. The struck cats would provide the sound. A fugue played on this instrument—when the ill person is so placed that he cannot miss the expressions on their faces and the play of these animals—must bring Lot's wife herself from her fixed state into conscious awareness.¹

This proposal should, I think, awaken the modern reader out of historical complacency as much as the real device was supposed to startle the madman out of a comparable conceptual lassitude. Is this, then, an example of the past as foreign territory, where a distant *mentalité* ruled, where what for us would be the perfume of the bizarre was for them only the air of the ordinary? Or is it merely a joke? Or is it maybe a bit of both?

Johann Christian Reil (1759–1813) issued this prescription in his curiously titled book *Rhapsodien über die Anwendung der psychischen Curmethode auf Geisteszerrüttungen* (Rhapsodies on the Application of Psychological Methods of Cure to the Mentally Disturbed). At the time of the book's appearance in 1803 Reil was perhaps the most famous medical scientist east of the Rhine. He was also an ingenious and untiring editor. He founded several medical journals, including two devoted to psychiatry, and even invented in 1808 the name "Psychiaterie" to designate the new discipline.² Yet Reil's contributions to that science have been historiographically slighted. Neglect has settled on his work, I believe, principally for three reasons. The first has to do with the publication of another treatise on mental illness that preceded his by two years, Philippe Pinel's justly famous *Traité médico-philosophique sur l'aliénation mentale, ou la manie* (Medical-Philosophical Treatise on Mental Disturbance, or Mania).³ On cursory inspection the two books appear similar—both, for example, advance "moral therapies" as the means to treat the curably insane. Given the apparent likeness of the volumes and Reil's citation of his predecessor,

1. Johann Christian Reil, *Rhapsodien über die Anwendung der psychischen Curmethode auf Geisteszerrüttungen* (Halle, 1803), p. 205; hereafter abbreviated RU.

2. With the philosopher Adalbert Bartholomaeus Kayssler, Reil founded, in 1805, the *Magazin für psychische Heilkunde*, and with the philosopher Johann Christof Hoffbauer, in 1808, the *Beyträge zur Beförderung einer Kurmethode auf psychischem Wege*. In the *Beyträge*, Reil published his own article describing the branches of medicine and placed special emphasis on the new area with the new name. See Reil, "Ueber den Begriff der Medicin und ihre Verzweigungen, besonders in Beziehung auf die Berichtigung der Topik der Psychiaterie," *Beyträge zur Beförderung einer Kurmethode auf psychischem Wege* 1 (1808): 161–79. See also the brief discussion of Reil's priority in naming in "Historical Notes: The Word *Psychiatry*," *American Journal of Psychiatry* 107 (May 1951): 868–69.

3. See Philippe Pinel, *Traité médico-philosophique sur l'aliénation mentale, ou la manie* (Paris, 1801).

historians have regarded his work as derivative and, despite its tremendous influence, as lacking in originality. The second reason for historical neglect has to do with the difficulty, for the contemporary reader at least, of the conception of mind found in the *Rhapsodien*. By contrast, Pinel's book assumed (though hardly explained or elaborated) a more straightforward Condillacian or sensationalist model of mind—mind as the result of the proper organization and deployment of sensory images. Finally, historians have been perplexed by the *Rhapsodien*'s style and mode of expression, as exemplified by Reil's cat-piano.⁴

The cat-piano, though, is emblematic of more deeply rooted differences separating Reil's ideas from those of Pinel. These differences in theories of mind, in therapeutic techniques, and in style of conception gave rise to quite distinct psychiatric traditions in Germany and France during the nineteenth century. Toward the beginning of Reil's career, however, he might have found common ground with the kind of medical empiricism that supported Pinel's theory of mind. For Reil had initially formulated a conception of living forces that made them logically indistinct from the standard, empirically established forces of physics and chemistry. His early proposals were so cogently persuasive that their intellectual momentum took them quite to the end of the century, though their author himself had abandoned them only a few years after they had been formulated. With the *Rhapsodien*, Reil dramatically shed his materialistic interpretation of living nature and adopted a radically contrary stance, which later would prove embarrassing to modern admirers of his various scientific accomplishments. I will describe the character and power of this new mode of thought, which underlay his psychiatric theory. I will also try to explain why this decisive shift occurred, a shift that has been a great puzzle to those historians who have worried about the

4. Among historians, for example, Gregory Zilboorg has great admiration for Pinel and some lesser toleration for Reil, whose various methods of treatment he finds bizarre and whose conception of mind he regards as "confused and unoriginal" (Gregory Zilboorg and George W. Henry, *A History of Medical Psychology* [New York, 1941], p. 290; see also pp. 287–90). Theodore Ziolkowski holds that Reil had not made one step beyond Pinel in his analyses of madness. Martin Schrenk provides the best comparison of Pinel's and Reil's ideas yet fails to consider their theories of mind and, by reason of temporal priority, judges Reil to be merely a kind of translator of Pinel. See Theodore Ziolkowski, *German Romanticism and Its Institutions* (Princeton, N.J., 1990), pp. 185–87, and Martin Schrenk, *Über den Umgang mit Geisteskranken: Die Entwicklung der psychiatrischen Therapie vom "moralischen Regime" in England und Frankreich zu den "psychischen Curmethoden" in Deutschland* (Berlin, 1973), esp. pp. 3–4. Recently Doris Kaufmann has provided a decidedly more positive assessment of Reil's contribution to psychiatry. She depicts him as an enlightenment figure who led the reform movement for treatment of the insane in Germany. She directs her attention, however, only to Reil's impact on social policy and on the construction of more humane institutions. She does not attempt to characterize his theory of mental illness or to situate him in respect to romanticism. See Doris Kaufmann, *Aufklärung, bürgerliche Selbsterfahrung und die "Erfindung" der Psychiatrie in Deutschland, 1770–1850* (Göttingen, 1995), esp. pp. 170–73 and 283–85.

trajectory of Reil's development. Not to delay gratification concerning the resolution of these problems, let me summarize by saying that Reil became romantically involved.

Not a few historians of romantic thought, especially its English strain, have represented the poetic endeavor as repelling the scientific, convinced of Allen Tate's argument that poetry is not only quite different from science, but in its essence is opposed to science.⁵ The early romantics, *die Frühromantiker*, were not, however, of this persuasion.⁶ Friedrich von Hardenberg (Novalis), Friedrich Schlegel, and Friedrich Schelling, the architect of the movement, concurred that "the objective world is only the original, though unconscious, poetry of the mind [*Geist*]."⁷ Schelling, for instance, sought to find in the experimental science of his day those contours that led the reflective mind back to a common source of scientific and poetic genius.⁸ At the turn of the century in Germany, then, no Blakean assumption existed that "Newton's particles of light" and "Israel's tents" that "shine so bright" could not equally illuminate the same mind about the features of nature.⁹ The relationship, though, still had to be tested and developed, as it were. In the case of Reil, the magnetic force of romanticism, emanating from its redoubt in Jena, bent his tempered biological theories away from the hard line of their original orientation—a testament to the transforming power of philosophy, poetry, music, and the kind of culture out of which a cat-piano could be conjured up.

Early Training and Practice

Anna Reil (née Jansen-Streng), wife of the Lutheran pastor Johann Julius Reil, gave birth to her first child, Johann Christian, on 20 February 1759 in the little village of Rhaude (Kreis Leer) in the far northwestern

5. See Allen Tate, "Literature as Knowledge," *Essays of Four Decades* (Chicago, 1968), pp. 72–105.

6. The argument of my forthcoming book, *Romantic Biology: From Goethe to the Last Romantic*, Ernst Haeckel, attempts to broaden this claim, since I believe that the main currents of biological science during the century flowed from German Romanticism.

7. F. W. J. Schelling, *System des transzendentalen Idealismus* (1800), *Schellings Werke, nach der Originalausgabe in neuer Anordnung*, ed. Manfred Schröter, 3d ed., 13 vols. (Munich, 1969), 2:340. When Schelling composed the *System*, he was much imbued with the aesthetic conceptions of Friedrich Schlegel.

8. For Schelling's theory of scientific and poetic genius, see esp. *ibid.*, 2:623–24. In these pages, Schelling granted the divergent tendencies of art and science, though, he argued, they had a common source in the ego. In his tract, he also aimed to undermine Kant's rejection of the possibility of scientific genius. Indeed, scientific genius, he maintained, had a necessarily aesthetic character. Schelling set out his theory of experimental science in *Einleitung zu dem Entwurf eines Systems der Naturphilosophie* (1799), *Schellings Werke*, 2:269–326.

9. William Blake, "Mock on, mock on, Voltaire, Rousseau," *The Essential Blake*, ed. Stanley Kunitz (Hopewell, N.J., 1987), p. 50.

part of the German lands.¹⁰ In 1770 the family moved to the seacoast town of Norden, where Reil matriculated at the Ulrichsgymnasium. His valedictory address to the school revealed the direction of both his intellectual and imaginative aptitudes—he poetized in long strings of alexandrines, singing “the praise of medicine” and cleverly, if exhaustively, taking leave of his king, town council, mayor, rector, fellow students, sisters, parents, and land.¹¹ In the fall of 1779 this gifted, though stubborn and antiauthoritarian, Frieslander began his university studies at Göttingen but quickly became dissatisfied and left for Halle the next year. At Halle he came under the influence of the great anatomist Philipp Friedrich Meckel, who poignantly proclaimed his enthusiasm for anatomy by requesting that upon his death his body be preserved for scientific delectation. Johann Friedrich Goldhagen, in charge of the natural history cabinet of the university, became a special friend, introducing his student to the mysteries of Freemasonry and sponsoring him as a lodge brother just after he had received his medical degree in 1782.

Later in 1782 Reil traveled to Berlin for further medical study, remaining there until the following year. He carried with him a letter of introduction written by Goldhagen to a former student of his, Marcus Herz. During the young physician’s brief time in the city, he became a regular guest at the Herz salon and there frequented the lecture sessions in physiology, medicine, and philosophy orchestrated by his host. Herz

10. I have found the following works helpful in reconstructing Reil’s life and thought: Henrich Steffens, *Johann Christian Reil: Eine Denkschrift* (Halle, 1815); Max Neuburger, *Johann Christian Reil: Gedenkrede gehalten auf der 85. Versammlung deutscher Naturforscher und Ärzte in Wien am 26 September 1913* (Stuttgart, 1913); Günter Engelberg, *Aus dem Leben des Dr. J. C. Reil: 19 Beilagen des General-Anzeiger Westrhauderfehn* (Westrhauderfehn, 1958); Hans-Heinz Eulner, “Johann Christian Reil: Leben und Werk,” *Nova Acta Leopoldina*, n.s. 20 (1960): 7–50; and Wolfram Kaiser and Reinhard Mocek, *Johann Christian Reil* (Leipzig, 1979). Though the latter book is an unhappy specimen of the mindset ruling East German intellectual life during the third quarter of this century, Mocek has recently produced a considerably more interesting and provocative work in his *Johann Christian Reil (1759–1813)* (Frankfurt am Main, 1995). He orients his study around the question of when Reil became a follower of Schelling. He argues that the transition to a more romantic mode of thought occurred in 1807—indeed, precisely in 1807. His dating and the time he spends securing the date appear to rest more on his desire to protect a hypothesis that supposedly explains the transition than simply on the evidence (see below). LeeAnn Hansen, by contrast, maintains that the transition began around 1802 or 1803. She presents her case in “Metaphors of Mind and Society: The Origins of German Psychiatry in the Prussian Reform Era” (paper delivered to the Fishbein Workshop in the History of the Human Sciences at the University of Chicago, Chicago, 1994). I believe Hansen, though unanchored in some important details, nonetheless has a steadier perspective on Reil’s development. Reil’s position within the larger context of German medicine is lucidly recounted in two recent studies: Cheryce Kramer, “The Psychic Constitution: Psychiatry in Early Nineteenth Century Germany” (master’s thesis, University of Cambridge, 1991), and Thomas H. Broman, *The Transformation of German Academic Medicine, 1750–1820* (Cambridge, 1996), esp. pp. 86–88, 120–22, 182–85.

11. This address is transcribed in Engelberg, *Aus dem Leben des Dr. J. C. Reil*, pp. 17–20.

had also been a student of Kant and had become an enthusiast for the new critical philosophy under the guidance of the master himself.¹² The *Kritik der reinen Vernunft* had appeared just prior to Reil's arrival, and so he and other visitors to the salon were treated to seminars on the ideas ensnared in the dense language of the book. On the periphery of Herz's demonstrations and lectures stood his beautiful, young wife, Henriette, who was but eighteen years old at the time of Reil's visits. She had only begun cultivating the artists, writers, philosophers, and statesmen who would find her charms more compelling than those of her husband.¹³

After a brief stint as a practicing physician in East Friesland, Reil received a call back to Halle in 1787, engineered by his former teacher Goldhagen, who also obliged him by dying shortly after Reil's arrival. With the new vacancy, he swiftly ascended from *extraordinarius* professor to *ordinarius* and then to director of the clinical institute (founded by Goldhagen) in the space of a few months. In 1789 he was named chief physician of the city and had many of its leading citizens as his patients, as well as those, like Goethe, who would travel some distance to seek his help.¹⁴

Reil's practical experience, his freethinking ways, his deep knowledge of science and philosophy, and his difficult and contrarian personality—to which his colleague Henrik Steffens would lovingly attest¹⁵—all of this gave him a taste for revolution, at least in medicine. In 1795 he founded the journal *Archiv für die Physiologie*, which became the herald of the movement he led, namely, the effort to make medicine a thoroughgoing *Wissenschaft*.¹⁶ He intended physiology to serve as the scientific foun-

12. Marcus Herz had been the respondent for Kant's inaugural dissertation at Königsberg in 1770—*De Mundi Sensibilis atque Intelligibilis Forma et Principiis* (Concerning the Forms and Principles of the Sensible and Intelligible World)—which established preliminary critical principles that would be further developed ten years later in the *Kritik der reinen Vernunft*. Herz's own *Betrachtungen aus der spekulativen Weltweisheit* (Considerations Drawn from Speculative Worldly Wisdom) (Königsberg, 1771) closely mirrored his teacher's dissertation.

13. For an engaging, if statistically spiked, portrait of Jewish intellectual life in Berlin at the turn of the century—especially the salons of Henriette Herz and Rahel Levin—see Deborah Hertz, *Jewish High Society in Old Regime Berlin* (New Haven, Conn., 1988).

14. See Steffens, *Johann Christian Reil*, pp. 14–15, and Engelberg, *Aus dem Leben des Dr. J. C. Reil*, pp. 27–38.

15. See Steffens, *Johann Christian Reil*, pp. 13–14.

16. In the preface to the first number of his new journal, which took the form of an open letter to professors Friedrich Albrecht Gren and Ludwig Heinrich Jakob, his chemistry and philosophy colleagues respectively, Reil made explicit his intention to bring medicine into the “form of a science [*Wissenschaft*]” (Reil, “An die Professoren Herrn Gren und Herrn Jakob in Halle,” *Archiv für die Physiologie* 1, no. 1 [1795]: 3). (The title page of the first volume carries the date 1796, as do most of the numbers in this volume; however, the first number of this volume is dated 1795. This letter is thus dated 1795.) He would further this aim by publishing in his journal articles on physiology that adopted the basic principles he laid down in his lead essay “Von der Lebenskraft.” For a discussion of Reil's efforts to make medicine *wissenschaftlich*, see the instructive article by Broman, “University Reform in Medical Thought at the End of the Eighteenth Century,” *Osiris*, 2d ser., 5 (1989): 36–53.

dition for medicine. But that discipline itself first had to be reformed, since, as Reil believed, physiology had made less progress than the other sciences. He diagnosed the problem, in the spirit of Herz and that greater teacher Kant, as that of not observing the boundaries of human knowledge. Inattention to those limitations allowed, he insisted, the obfuscating ideas of metaphysics to be smuggled into the realm of the physical sciences.¹⁷ The conception that had caused most of the problems in physiology was that of a *Lebenskraft*, of a life force. He offered his monograph "Von der Lebenskraft," which formed the lead article of the new journal, as a specific for that malady.

Lebenskraft

In his tract, Reil accepted the epistemology of Kant's first *Critique*, though he rejected the regulative biology of the third. In the spirit of the former, he agreed that we had access only to phenomena, which in the external realm had to be scientifically understood in causal and spatial terms. Thus he ruled out any appeal to a soul (à la Georg Stahl) as the sort of entity that might explain fundamental operations of the body. He also thought that Johann Friedrich Blumenbach's concept of the *Bildungstrieb* (formational drive) conveyed misleading implications, since *Trieb* suggested that some feeling or mental representation functioned in the interstices of purely material operations. Physiological processes, he maintained, were determined by "blind necessity," not by any ghostly intentions.¹⁸ Reil did not, however, reject a mental principle *tout court* since he himself, at this early stage of his reflections, embraced a kind of Kantian dualism. The understanding of cognitive processes, therefore, might require principles other than those of physics and chemistry, but the construal of basic physiological activity did not. Reil insisted that he would seek "the foundation of all phenomena of animal bodies, which are not representations or not connected with representations [that is, mental operations] as cause or effect, in animal matter, in the original differences of their basic material and in the composition [*Mischung*] and form [*Form*] of that material" ("VL," p. 11). Sensibility, digestion, growth, reproduction—all the physiological operations of the body had thus to be under-

17. Even before the publication of Kant's first *Critique*, Herz was proclaiming the doctrines of his master. In his *Betrachtungen aus der spekulativen Weltweisheit*, Herz laid it down as a rule that "the fundamental principles of our sensible knowledge must never overstep their limits and become mixed with those that our pure rational knowledge has prescribed. . . . It is indeed rather clear that those things that can in no way become known intuitively are unthinkable and therefore impossible" (Herz, *Betrachtungen aus der spekulativen Weltweisheit*, pp. 105–6).

18. Reil, "Von der Lebenskraft," *Archiv für die Physiologie* 1, no. 1 (1795): 66–67; hereafter abbreviated "VL." For an explanation of the dating of this essay, see n. 16.

stood purely as functions of the chemical composition and structural form of the material elements making up the animal organism. These basic material elements could also be found in nonliving bodies, though in combinations differing from those found in living ones.

According to Reil, the conventional name for the property of matter that allows it to be perceived by human senses is “force [*Kraft*]” (“VL,” p. 19). In itself, though, “force is a subjective concept, the form according to which we think the connection between cause and effect” (“VL,” p. 46).¹⁹ Talk about life forces, then, ultimately referred only to the necessary causal interactions of the material elements of an organic body and their outcomes: “If it were possible for us to think clearly of each body as it is—simultaneously of the nature of its constituent elements and their connection, of their composition and form—then we would not find the concept of force necessary, a concept that produces so many erroneous conclusions” (“VL,” p. 46).

Reil’s causal understanding of *Lebenskraft* differed considerably, for example, from Alexander von Humboldt’s early notion of *Lebenskraft* and Blumenbach’s comparable theory of the *Bildungstrieb*. Humboldt had supposed that a vital force operated in living bodies to dissolve the usual affinities of chemical elements in animal matter and to prevent those elements from freely uniting.²⁰ Blumenbach, who had a comprehensive theory of vital force, held the *Bildungstrieb* to be an intermediate cause determined by some hidden, more ultimate cause (God); it consequently acted as a secondary cause to produce more immediately the phenomena of life—generation, nutrition, and repair.²¹ Reil, by contrast, thought of the life force as a subjective concept; its objective referent, he argued, was merely the causal relationships between chemical elements, the ones that produced the phenomena of life. He concluded, therefore, that life forces

19. For a discussion of Reil’s concern with the subjective side of medical knowledge, see Broman’s brief but clear discussion in his *The Transformation of German Academic Medicine*, pp. 86–88.

20. Humboldt hardly had an extensive theory of vital force, though he did have some presentiments. In the appended *Aphorismi* to his *Florae Fribergensis*, he remarked that “we call those bodies animated and organic that, though they tend constantly to change into new forms, are contained by some internal force, so that they do not relinquish that form originally introduced. . . . That internal force [*vim internam*] which dissolves the bonds of chemical affinity and prevents the elements of bodies from freely uniting, we call vital” (Alexander von Humboldt, *Florae Fribergensis Specimen, Plantas Cryptogamicas Praesertim Subterraneas Exhibens* [Berolini, 1793], pp. 133–35). Humboldt dressed up this idea in a metaphorical story, “Die Lebenskraft oder der rhodische Genius, ein Erzählung,” that Schiller published in his journal *Die Horen* 5 (1795): 90–96. Humboldt reprinted his fable in the second and third editions of his *Ansichten der Natur*. See, for instance, Humboldt, *Ansichten der Natur, mit wissenschaftlichen Erläuterungen*, 3d ed. (Stuttgart, 1849), pp. 315–24. Humboldt, responding to Reil’s criticisms, later reformulated his conception of vital force in decidedly more neutral and ambiguous terms.

21. See Johann Friedrich Blumenbach, *Über den Bildungstrieb und das Zeugungsgeschäfte* (Göttingen, 1781).

pretending to be something other than causal functions of matter should not be invoked in a truly scientific physiology. The so-called life force was only another physical force of nature.²²

In his monograph, Reil advanced a quite materialistic and mechanistic conception of organic processes. The fundamental operations of assimilation, growth, and reproduction occurred by way of external matter (in the form of food) first being electively attracted to the right parts of an animal body and then being chemically altered through a kind of "crystallization of animal matter" ("VL," p. 67). In the case of reproduction, Reil did not wish to pronounce definitively on the debates between evolutionists (that is, preformationists) and epigeneticists.²³ "How the seed [*Keim*] arises? How it is formed? Whether it contains the entire organic individual in miniature or only a part of it, and which part? This we do not know" ("VL," p. 79). The kind of analysis he undertook, however, required him to reject a thoroughgoing epigenesis, since that would suggest the operation of an extrinsic force, a *Lebenskraft*, that brought form out of strictly homogeneous matter. But whether the paternal germ only stimulated the maternal seed or actually contributed a part to it, the formation of the fetus after conception had to be analogous, Reil thought, to crystallization (see "VL," p. 80).

Reil's metaphor of crystallization spread through all parts of his treatment of biological phenomena. Since crystallization was a clear example of inanimate assimilation and growth, it served well his fundamental assumption that organic life derived from basic chemical and physical forces. This virtue provided the metaphor with an intellectual momentum that would propel it through the next century, allowing such biologists as Theodor Schwann and Ernst Haeckel to hitch to it their own theories of organic formation.

Though he regarded animal and plant life as completely material phenomena, Reil did not think matter could compose itself spontaneously into living organisms. He would not, for instance, have attempted the fanciful experiment of Goethe's Wagner, who in *Faust* mixed just the right chemicals to produce a crafty, lovesick homunculus. Wagner's little man in a bottle (one of Goethe's finer creations) resulted from a purely

22. Ziolkowski—who provides a sharply analytical, if brief, account of Reil's work in psychiatry—thinks the "Lebenskraft" article to be an example of romantic *Naturphilosophie*. Obviously he did not get much beyond the title of the piece. See Ziolkowski, *German Romanticism and Its Institutions*, p. 182.

23. In this early period, *evolution* did not refer to species change but to the embryological theory that the fetus was already a preformed adult that simply had to unfold, or "evolve," to achieve more visibly articulate form. The opposing theory of epigenesis held that the fetus developed gradually from an unformed, homogeneous mass. For a discussion of the origin of these ideas and their relation to species evolution, see Robert J. Richards, *The Meaning of Evolution: The Morphological Construction and Ideological Reconstruction of Darwin's Theory* (Chicago, 1992).

unmediated chemical reaction. By contrast, Reil believed that the production of living organisms needed, as it were, some hair of the dog. That is, the chemical elements of organic bodies required a catalyst to organize them into a living being—and the catalyst could only be life itself. Reproduction could thus occur only in the usual fashion, not in Wagner's fashion (see "VL," pp. 25–26). This requirement that life must produce life, however, did not lead Reil to adopt anything like Kant's solution to the problem of the organic. Indeed, he explicitly rejected Kant's analysis in the third *Critique*.

Kant also maintained that we had to conceive of life as coming only from previous life, not because he thought some spark was needed but because life itself seemed the only source for an organization that elevated a creature to a higher level of being than that of a mere chemical-mechanical contrivance. He believed we properly conceived an organism as a "natural end [*Naturzweck*]," that is, as an individual in which each part was related to all the other parts reciprocally as means and ends, and in which the whole determined the parts and the parts the whole.²⁴ After citing Kant's analysis of our necessary understanding of the organic, Reil dismissed it. "Indeed," he contended, "each part forms itself and maintains itself through its own energy; its connection with the other parts is only the external determination whereby its force can be effective" ("VL," p. 55). As a good physician, Reil knew that many important organs of the body could fail—for example, particular muscle groups, this or that sense organ, the higher faculties of the brain—without endangering the maintenance of the whole. Indeed, he sagely observed that "we often find in an animal one part that is principally good or bad, in opposition to the character of the other parts. With scholars, not infrequently, we find all the organs ill or failing, except the brain" ("VL," pp. 105–6). The individual parts of the body, he maintained, existed fairly independently of one another. In a metaphor that would resonate with many biologists throughout the nineteenth century, Reil likened the parts of an organic body to a republic:

The animal body is like a large republic, which consists of many parts. These parts, of course, stand in a determinate relationship with one another and they contribute to the maintenance of the whole. But each part operates through its own force and possesses its own perfections, deficiencies, and failures independently of the other branches of the body. ["VL," p. 105]

The force that each organ exhibited came not from other organs or the whole, but from the form and composition of the matter of that particular

24. Immanuel Kant, *Kritik der Urteilkraft*, in *Werke*, ed. Wilhelm Weischedel, 6 vols. (Wiesbaden, 1956–64), 5:483–84 (A 285–86, B 289–90).

part. The phenomena of life, according to this analysis, stemmed from the constituent, citizenlike parts in their external, causal interactions with each other. Reil simply denied the teleological relationship that Kant prescribed for organisms.²⁵ If Prussian imperialism could not prevail on the battlefield, it should not reign in the laboratory.²⁶

Through the 1790s Reil remained convinced that the organization of the animal body, in sickness and in health, would arise from the bottom up, that is, would emerge from the interaction of lower forces. He authoritatively enjoined this conviction through vigorous and often scathing reviews of books that postulated a force of life as a cause independent of the forces of physics and chemistry.²⁷ Reil's basic assumption had extreme inertial power, continuing on as a fundamental principle for Germany's leading medical authority in the mid nineteenth century, Rudolf Virchow. Reil himself, though, did not remain fixed on his original assumption. By the turn of the century, his experience and considerations ripened him for a keener appreciation of a top-down view, a view taken from cultivated romantic heights. He exhibited this new perspective in his writings on mental illness.

Studies of Mental Illness

The first of his systematic considerations of various forms of psychological disturbance came in his 1802 book *Fieberhafte Nervenkrankheiten* (Feverish Nervous Illness), volume 4 of his *Ueber die Erkenntniss und Cur der Fieber* (On the Understanding and Cure of Fever). The dedicatory page of this fourth volume must have arrested the eye of his readers then as it does today: "To the Supreme Consul of the French Republic, Buona-

25. Timothy Lenoir, *The Strategy of Life: Teleology and Mechanics in Nineteenth-Century German Biology* (Chicago, 1989), pp. 35–37, regards Reil, like Blumenbach and Karl Kielmeyer, as an advocate of a teleomechanist view derived from Kant. If Reil can be so easily assimilated to a position he expressly denied, then nothing is less fixed than the past.

26. The potency of this republican metaphor, exercised just at the time that the French had humiliated the Prussian king and forced him into neutrality (1795), could not fail to excite a liberal readership sympathetic to the revolution. The theory of the cell state and its rather different political associations in the latter part of the nineteenth century, especially in the science of Rudolf Virchow and Haeckel, has been explored by Paul Weindling. See his "Theories of the Cell State in Imperial Germany," in *Biology, Medicine, and Society, 1840–1940*, ed. Charles Webster (Cambridge, 1981), pp. 99–156.

27. For example, Reil in quick succession reviewed Johann David Brandis's *Versuch über die Lebenskraft* (Hannover, 1795) and Christoph Wilhelm Hufeland's *Ideen über Pathogenie und Einfluss der Lebenskraft auf Entstehung und Form der Krankheiten* (Jena, 1795). The review of Brandis was mildly approving of the particular features of the book, though skeptical of its appeal to a *Lebenskraft*; in the case of Hufeland, however, he heaped sarcasm and ridicule onto his friend, certainly confirming Steffens's estimate of his difficult character. See Reil's two-part article, "Rezensionen," in *Archiv für die Physiologie* 1 and 2 (1796 and 1797): 178–92 and 149–52.

parte, a knowledgeable friend of the sciences.”²⁸ (One is tempted to believe that Reil crafted his dedication ironically, namely to the healer of a feverish and mentally disturbed nation.)²⁹

Reil treated mental illness as part of his five-volume work ostensibly because derangement often accompanied fevers; but his own experience with friends who suffered various disturbances, which he mentioned among his examples, must also have stimulated his interest in these phenomena.³⁰ He augmented his experience in this area by considerable reading in the pertinent literature, including Pinel’s just-published *Traité médico-philosophique sur l’aliénation mentale, ou la manie*. Kant’s first *Critique* also played a significantly informing role.

Reil thought of mental illness as a disruption of the normal functioning of the powers of the soul, which he glossed explicitly in Kantian fashion.³¹ The very basic powers were the typical Kantian ones of consciousness, understanding, reason, imagination, and sensibility. In his application, though, Reil distinguished three main areas of representational understanding, malfunctions of which might produce illness: representations of “common sense” (*Gemeingefühl*), representations of sensibility, and representations of imagination (*FN*, p. 261).³² Common sense, in Reil’s account, consisted in a perception of the well-being of the different parts of the body, and its abnormal activity could result in hypochondria, melancholy, and vertigo, as well as in nonspecific dreaminess (see *FN*, pp. 261–62, 265–73). Problems with sensible representations might produce phantasies and hallucinations (see *FN*, pp. 274–78). And, finally, the classic cases of insanity would arise from an energetic imagination, in which the sufferer could not distinguish manufactured images from reality. This last condition produced those archetypal examples in which “the sick person plays a king, a general, or soldier” (*FN*, p. 279). Reil thought that St. Theresa and Emanuel Swedenborg undoubtedly suffered from this kind of derangement (see *FN*, p. 288).

In his analysis, Reil supposed that the powers of the soul expressed the more fundamental forces arising out of the composition and form (his basic biochemical categories) of the brain and nerves. “The powers of the soul,” he argued, “stand in exact relationship to the operations of the

28. Reil, *Fieberhafte Nervenkrankheiten*, vol. 4 of *Ueber die Erkenntniss und Cur der Fieber* (Halle, 1802); hereafter abbreviated *FN*.

29. Kramer surmises this as well. See her “The Psychic Constitution,” p. 51.

30. Reil had attended his friend and mentor Goldhagen during his final illness, which involved hallucinations and other mental aberrations. Reil left a history of this illness in an essay composed in 1788, his “*Krankheitsgeschichte der Oberbergraths J. F. G. Goldhagen*,” *Kleine Schriften wissenschaftlichen und gemeinnützigen Inhalts* (Halle, 1817), pp. 3–29.

31. In *Fieberhafte Nervenkrankheiten*, Reil explicitly refers to Kant’s *Kritik der reinen Vernunft* as the source for his analysis of the powers of the soul; see *FN*, p. 253.

32. Reil had written an extensive essay on the “common sense” earlier in 1794; his “*Ueber das Gemeingefühl*” was reprinted in his *Kleine Schriften wissenschaftlichen und gemeinnützigen Inhalts*, pp. 34–112.

nervous system, which is extended throughout the whole organism and has in each part a particular function" (FN, p. 259). To the soul itself he accorded only a kind of Kantian phenomenal existence, since what it really might be and what connections it might actually have to both the supersensible and corporeal worlds remained "totally unknown to us" (FN, p. 253). The entire direction of Reil's analysis implied that the powers that were called psychic could ultimately be reduced to forces of the nervous system. In this respect, his treatise on mental illness conformed closely to the principles laid down in his monograph "Von der Lebenskraft."

During the year of the publication of his volume on psychiatric fevers, a new world dawned for Reil. Early in 1803 he saw through the press a most unusual work, also on the subject of mental illness, his *Rhapsodien über die Anwendung der psychischen Curmethode auf Geisteszerrüttungen*. This book differed fundamentally, however, from the just-completed fourth volume in his series on fevers.

Reil's *Rhapsodien* became perhaps the most influential work in the shaping of German psychiatry before Freud. The conditions of its origin were complex, involving medical practice, philosophical reorientation, and the new cultural environment in which Reil found himself. As before, Reil's experience in treating many in his regular practice who suffered from various mental derangements, including some of his friends (for example, Goldhagen and Herz), obviously played a role.³³ He also wished to contribute, as his preface made clear, to the new movement that sought a more humane and rational treatment for the insane, a movement in Halle led by his friend the preacher Heinrich Wagnitz, to whom his book was dedicated. Unlike Reil's previous work, the model of mind that he developed in the *Rhapsodien* went considerably beyond Kantian boundaries. Quite clearly he had been reading Schelling, the young, charismatic philosopher, who at the time was a member of the romantic circle in Jena and had been causing quite an intellectual stir throughout the Germanies. Schelling's romantic idealism, I believe, fundamentally reoriented Reil's understanding of the root causes of mental illness. In the light of this new philosophical conception, Reil came to regard insanity as stemming from the fragmentation of the self, from an incomplete or misformed personality, and from the inability of the self to construct a

33. It seems a historiographic commonplace that Reil actually had little experience with mentally ill patients. In his *Rhapsodien*, Reil specifically recounted the case of his beloved teacher Goldhagen, who, at the end of his life, would wander through his own house to find the sick person, only to realize finally that he was searching for himself; he also described the problems of Herz, who suffered from delusions about his location during his illness (see *RU*, pp. 70 and 86). In the *Rhapsodien* Reil referred to other patients who had comparable ailments. His good friend Henrik Steffens, who would have known, pointedly declared that Reil "was a very successful psychiatric [*psychischer*] physician, and many who suffered from obvious madness were restored by him" (Steffens, *Johann Christian Reil*, p. 48).

coherent world of the nonego—all of which resulted from the malfunctioning of self-consciousness, that fundamentally creative activity of mind postulated by the romantic philosophers.

Though various particular events could precipitate a breakdown in the self, the undeniable progressive advantages of civilization, Reil thought, inevitably had their dark side. The pressures of advancing culture could as well fracture the integrity of the self. In the *Rhapsodien*, he sharply diagnosed civilization and its discontents:

Nature has endowed us with so many divine impulses toward lofty and noble deeds; the drive for fame, for one's own perfection; the power of self-determination and rule; and the passions, which through their storms guard against the deadly desire for sleep. Yet nature, through these very same inclinations, has also planted in us as many seeds for madness [*Narrheit*]. By equally measured step, as we advance on the path of our sensible and intellectual culture, we fall back ever nearer to the madhouse. [*RU*, p. 12]³⁴

Thus the same powers of nature that lead us to construct a shining city on a hill can also shatter the self that mirrors the world, so that the city might be duplicated in a frenzy of distorted images. That, at least, is the metaphor with which Reil dramatically opened his volume:

It is a remarkable experience to step from the whirl of a large city into its madhouse. One finds here repeated the same scenes, though as in a vaudeville performance; yet, in this fool's system there exists a kind of easy genius in the whole. The madhouse has its usurpers, tyrants, slaves, criminals, and defenseless martyrs, fools who laugh without cause and fools who torture themselves without cause. Pride of ancestry, egoism, vanity, greed, and all the other idols of human weakness guide the rudder in this maelstrom, just as in the ocean of the large world. Yet every fool in Bicêtre and Bedlam stands more open and innocent than those from the great madhouse of the world. In the world, the vengeful ravage, so that fire falls from the heavens; and the cultivated leader of armies believes, in light of a madly bold plan, that he can destroy half the world with the sword. But there [in the madhouse] no villages smolder, and no men whimper in their own blood. [*RU*, pp. 7–8]

Aside from the contemporary ring of these portrayals of the troubled soul in its doubles, these passages indicate another significant respect in

34. Reil had been convinced for some time of the Rousseauian thesis that civilization and its pressures contributed to mental illness. He worked out this thesis in a series of articles published in *Wöchentliche Hallische Anzeigen* in 1788 and 1789. See Michael Hagner's discussion in *Homo cerebralis: Vom Seelenorgan zum Gehirn* (Berlin, 1997), p. 160. See also Ziolkowski's lucid description of Reil's account of madness in *German Romanticism and Its Institutions*, p. 184.

which the *Rhapsodien* differed from Reil's previous work, as well as from that of his predecessors—their delicious mode of expression. The literary style of the book made it shine as a quintessential exemplar of the burgeoning romantic movement. Indeed, its metaphors unleashed a menagerie of wild and wonderful images, and its examples and proposals exuded the macabre and ironic. As a consequence, the book stood at some distance from the usual run of scientific and medical treatises of the time.

In the *Rhapsodien*, Reil again proposed a medical and quasi-physiological interpretation of mind, identifying mental powers quite closely with underlying forces of the brain and nervous system.³⁵ In "Von der Lebenskraft," Reil had argued that, like a republic, the forces that held an organism together arose from its constituent citizen-elements. Now, however, he represented the nervous system as imperial, a kind of Napoleon that instituted a dynamic ordering for the various lower centers of force. But this Napoleon came up from the people, as it were; that is, the forces expressed at lower levels of interaction gave rise to yet higher syntheses, to transmutations of organization and powers. This "dynamische Evolution," to use Schelling's terms for the process, would lead ultimately to a controlling force of nervous integration.³⁶ The nerve

35. Hansen, in a rather nicely creative turn, argues that Reil consciously adopted a model from Herz's treatise on vertigo (*Schwindel*) that supposedly gave physiological status to Kantian mental processes. As seductive as her argument initially appears, I do not find it plausible for several reasons. First, in none of the generous footnotes either to "Von der Lebenskraft" or *Rhapsodien*, the two works upon which Hansen focuses, does Reil leave a whisper of reference to anything by Herz. Nor does Reil mention Herz in *Fieberhafte Nervenkrankheiten*, where he specifically talks about vertigo. But, more importantly, Herz in no way attempted to argue that mental processes could be given a physiological representation in the nervous system (certainly not in the manner that Reil suggested). In *Versuch über den Schwindel*, Herz distinguished two kinds of vertigo, one that arose from psychological causes and one from physical. In psychological onset vertigo, he maintained, ideas (*Vorstellungen*) would rapidly zip through consciousness, tumbling into confusion. See Herz, *Versuch über den Schwindel* (Berlin, 1786), pp. 224–30. In his analysis of this sort of dizziness, he explicitly denied any underlying neurological representations or causes, such as a twirling of nervous fluid, which many physicians had postulated; see pp. 136–52. Further, he rejected the hypothesis of *materielle Ideen*, a hypothesis that Reil came close to holding; see pp. 152–54. Herz certainly believed that every idea or act of will would result in a nerve movement but argued that the connection between ideas and nerves was quite "arbitrary"—the Creator could have connected ideas and nerve movements in an infinite number of other ways (see pp. 144–45). Herz's dualism was even greater than that of Descartes, who at least did invoke something like material ideas. Reil, on the other hand, came close to holding an identity theory of mind and brain, about which Hansen says some interesting things, especially about the bottom-up kind of integration exemplified by the nervous system. See Hansen's "Metaphors of Mind and Society" and "From Enlightenment to *Naturphilosophie*: Marcus Herz, Johann Christian Reil, and the Problem of Border Crossings," *Journal of the History of Biology* 26 (Spring 1993): 39–64.

36. Schelling, *Erster Entwurf eines Systems der Naturphilosophie* (1799), *Schellings Werke*, 2:19. In *Von der Weltseele*, which Reil read (see below), Schelling argued that the same prin-

complex, Reil urged, was “the knot that ties organization together so as to lift it above lifeless nature as natural purpose [*Natur-Zweck*]” (*RU*, p. 112). “The brain,” in his altered metaphor, “may be conceived as a synthetic product of art, composed of many sounding bodies that stand in a purposeful relationship (that is, in rapport) with one another” (*RU*, p. 46). Any change in the brain’s components from external sources would then change the orchestration of the whole.

The ordering of these relations of the parts of the soul’s organ is grounded in a determined distribution of forces in the brain and the whole nervous system. If this relationship is disturbed, then dissociations, volatile character, abnormal ideas and associations, fixed trains of ideas, and corresponding drives and actions arise. The faculties of the soul can no longer express the freedom of the will. This is the way the brain of a mad person is produced. [*RU*, p. 47]

Quite obviously Reil now conceived of the nervous system as an integrating force designed to achieve a “natural purpose,” precisely the conception of organic activity rejected in his earlier “Von der Lebenskraft.”

Like Freud after him, Reil would have preferred an array of medical specifics to reorder defective nervous centers more directly. Little, though, was available. Opium might immediately quiet someone in a frenzy, but the outcome would only be a calmer madman (see *RU*, p. 47). The *Rhapsodien* instead proposed an indirect method of cure, which would leap past the obstacles to direct intervention. Reil believed psychological means could be effectively employed to alter deficient ideas and abnormal emotional states, at least of the curably insane.³⁷ If psychological manipulations were successful, then the underlying nervous connections would be properly readjusted and the rational operations of mentality restored (see *RU*, p. 150).

It would be a mistake, though, to think of Reil as introducing, via the mind, an indirect means of altering the pathological brain. In his construction, brain and mind became inextricably joined. Indeed, not worrying about theoretical problems of the mind-body relationship, he treated them as virtually identical, as if mind were completely instantiated

ciple lay at the root of nonliving and living nature, and that principle itself was organic. See Schelling, *Von der Weltseele, eine Hypothese der höheren Physik zur Erklärung des allgemeinen Organismus* (1797), *Schellings Werke*, 1:413–651, especially p. 418. In his *Erster Entwurf eines Systems der Naturphilosophie*, Schelling described the further syntheses of the fundamental organic principle, as it passed through higher stages of the inanimate and animate, as a process of “dynamische Evolution.” See also Richards, *The Meaning of Evolution*, pp. 28–29, for a further discussion of Schelling’s concept of dynamic evolution.

37. Reil knew that some people were irretrievably mad and could only be humanely cared for, not cured; see *RU*, pp. 20–21.

in the nervous system.³⁸ Hence, an altered mind was an altered brain. This practical identity justified, to some extent anyway, his use of a mixed mental and physical vocabulary—though even today, it is hardly the style of medical writers to avoid scrupulously verbal and conceptual promiscuity when discussing the operations of the brain or mind. The close identification of brain and mind would have been more offensive had Reil retained Kantian ties. But his mental model, launched just the year before in his volume on fevers, slipped its Kantian moorings and sailed away on currents flowing directly from idealist philosophy.

In the *Rhapsodien*, Reil distinguished three chief forces of the soul, whose disruption could produce pathology. These were self-consciousness (*Selbstbewusstsein*), prudential awareness (*Besonnenheit*), and attention (*Aufmerksamkeit*). Though he had mentioned the latter two powers in his earlier work on mental illness, he devoted most of his effort in the *Rhapsodien* to the analysis of a force now considered the most crucial for understanding pathologies, that of self-consciousness and its attendant powers of temporal and spatial perception.

Reil conceived of self-consciousness as a distinctively active force, much in the manner of Schelling, who, unlike Kant, made self-consciousness do real work in the construction of the self and its world.³⁹ “The essence of self-consciousness,” Reil held, “seems chiefly to consist in joining the manifold into unity and assimilating the representations as one’s own” (*RU*, p. 54). Self-consciousness wove together disparate representations (*Vorstellungen*) into a coherent whole and constituted them as *ours*. Without this force each of us would become “an empty likeness in the mirror of a sea that simply reflects floating objects but cannot hold fast to the received images, cannot make them one’s property” (*RU*, pp. 53–54). Moreover, without self-consciousness we would lack personality; our history would remain disconnected, scattered shards without solidifying temporal relationships. Self-consciousness “synthesizes the mental

38. Reil periodically asserted in the *Rhapsodien* that the relationship between mind and body simply remained unclear; see, for example, *RU*, p. 111. Hagner has also interpreted Reil’s theory of mind-brain as asserting a practical identity between the two. See Hagner, *Homo cerebrialis*, pp. 157–70.

39. Hansen, in “Metaphors of Mind and Society,” does not distinguish between Kant’s conception of mind and Schelling’s, amalgamating the two under the rubric of idealism. At the time, however, these two conceptions were thought totally opposed. Kant’s theory of the self and structure of the phenomenal world required the postulation of a “thing-in-itself.” Schelling denied the existence of that metaphysical entity and proclaimed that the absolute ego created both the empirical self and its world. While Reil left no explicit references in his footnotes to Fichte or Schelling, Hansen is generally correct in characterizing his position as idealistic. Reil’s construction of mind is quite active, and self-consciousness, the chief power of the idealist, is given center stage. For a general discussion of Schelling’s *Naturphilosophie* and its impact on medicine at the beginning of the nineteenth century, see Broman, *The Transformation of German Academic Medicine*, pp. 90–101.

man, with his different qualities, into the unity of a person" (*RU*, p. 55). The child, by contrast, having an incompletely developed power of self-consciousness, is like the madman whose faculty has deteriorated. The child thus displays through absence the vital ties between self-consciousness and personhood:

The child also observes; it observes itself and the world, but without connection. Its ideas flow disconnectedly, as the images in a brook. It plays with its own limbs, as with strange objects. It feels something, namely itself, and does so with pleasure or pain, which stimulates it to laugh or cry. But it does not recognize that it is the person who represents the world and through its own self is affected either pleasurable or painfully. [*RU*, p. 57]

As the individual emerges from childhood, the self-conscious activities that constitute the ripper intuitions of time and space create a historical personality. Those intuitions endow us with "a consciousness of the past and connect everything that has seeped into our awareness from the world—all the catastrophes of our bodily and psychic existence, which are reproduced in our memories and fantasies, are joined to the governing ego, to which also our present condition is linked" (*RU*, p. 58). And the world, too, comes into view from the vantage of our personality. Reil captured this transcendental posture with another of his vivid images:

The mind, in self-consciousness, rolls up the immeasurable thread of time into a ball, reproduces the long-dead centuries, and gathers into the miniature of one representation mountain chains, rivers, woods, and the stars strewn through the firmament, all stretching into endless space. The mind feels itself likewise in each representation, it relates what is represented to itself, as the creator of the same, and maintains thereby a special rule over the world outside of itself, insofar as it is representable. [*RU*, p. 55]

When self-conscious action falters, when pathology of the ego strikes, then personality fragments and the world becomes incoherent. Some people will not be able to distinguish real objects from phantoms of their imaginations. Or they might react in horror to the commonplace and with indifference to the horrible, as when a patient can endure a needle stuck through an arm without seeming to register pain. The fractured personality might set up a double, in which one part speaks to the other as to a separate individual. At times the deranged person will be convinced that he or she is someone else. A woman of Reil's acquaintance so identified with the refugees from the French Revolution that she thought herself one of them (see *RU*, pp. 75–78). When the faculty of prudential awareness, which keeps mental focus fixed on an object or project, be-

comes weakened, then attention shifts with the wind and patients live in another world. But what could be done for such patients? Psychological methods, Reil believed, could be employed.

Rudimentary theories of psychological methods of cure had already begun to spread in Europe and the United States during the romantic period.⁴⁰ Reil made himself quite familiar with the relevant literature, which drifts through his footnotes. The classic work of the genre, Pinel's *Traité médico-philosophique sur l'aliénation mentale, ou la manie*, left, however, a larger wake than the rest. Reil had cited Pinel previously in his book on fevers, but the *Rhapsodien* made more generous use of the tract, perhaps because a German translation had recently come into his hands.⁴¹

Reil thought there were enough madmen in France after the revolution to supply Pinel with sufficient cases for an extensive study, but he judged the Frenchman's work, while "excellent in particular parts, ill in systematic treatment, and without principles or originality" (*RU*, p. 31). Reil, one of the most famously accomplished men of his profession, may have been negatively reacting to what Jan Goldstein calls the "populist" character of Pinel's treatment regimens—that is, his borrowing of methods from nonprofessional empirics and "quacks," who nonetheless had some success in treating the insane.⁴² One might suspect, though, that these more superficial differences between Pinel and Reil disguised a deeper unity of conception, since, after all, they both advocated a kind of psychological therapy. But as one descends to more profound levels, the rifts appear even larger. Pinel had cast his notions about therapy into a Condillacian sensationalism, which supposed that ideas streamed rather directly from the empirical world into the mind; madness, according to this interpretation, resulted from the improper arrangement and ordering of those ideas. Reil, by contrast, assumed, in his Schellingian way, that consciousness created both the self and the world whence ideas supposedly came. Madness stemmed not from a lack of logic in the ordering of ideas; rather, it flowed in broken rivulets through the cracks of a fragmented personality. Pinel's diagnostic categories—melancholia, mania without delirium, mania with delirium, dementia, and idiotism—were quite general and depended on the kinds of symptoms displayed. Reil's categories were more refined and were based on the faculties of mind

40. See Schrenk, *Über den Umgang mit Geisteskranken*. Jan Goldstein offers the most articulately detailed analysis of the methods and philosophical framework behind Pinel's development of the "moral cure" of the insane. See Jan Goldstein, *Console and Classify: The French Psychiatric Profession in the Nineteenth Century* (Cambridge, 1987), esp. pp. 64–119.

41. See Pinel, *Philosophisch-Medicinische Abhandlung über Geistesverirrungen oder Manie*, trans. Michael Wagner (Vienna, 1801). Though Reil had Pinel's volume at hand when he wrote his work on fevers, he seems not to have had the German translation, which is the more extensively cited work in the *Rhapsodien*.

42. See Goldstein, *Console and Classify*, pp. 72–89.

assumed to be affected.⁴³ Pinel's recommendations about the sort of moral treatment to be administered lacked specificity; they had no ground, as his German translator judged, "in any established and determinate principle."⁴⁴ Pinel, in justifying his admittedly vague suggestions, argued that it was unwise to make general prescriptions for all classes of people—the Jamaican slave surely had to be treated differently than the "well-bred Frenchman."⁴⁵ Reil's therapeutic suggestions drew inspiration from Pinel, but also from other authors, such as the Englishmen Francis Willis and Alexander Crichton, and the Germans Johann Langermann and Johann Erhard. But as compared to the prescriptions of his predecessors, Reil's were considerably more numerous and more specific to the disease symptoms and the faculties that produced them. Finally, at the most comprehensive level of intellectual constitution, in the orbits of imaginative construction, Reil and Pinel lived worlds apart. Against the empiricistic and prosaic formulations of Pinel's work stands the rhapsodic and poetic character of Reil's book. The psychiatric tradition that Reil spawned could well have grown to produce a Freud; the French tradition of Pinel, only a Charcot.⁴⁶

The psychological methods that Reil prescribed ranged from the commonsensical to, from our perspective, the bizarre (see *RU*, pp. 182–217). For example, one might bring a patient to a sense of well-being by exposing him or her to quite normal surroundings and a good diet (even spiking the wine with a bit of opium to produce a warm, contented glow). Plenty of sunshine could also yield positive results. Gymnastic exercises and dancing might harmonize the mind just as they brought the body into balance. Sexual intercourse (*Beischlaf*), perhaps with a prostitute, could well reduce accumulated lascivious energy that might contribute to mental disturbance (see *RU*, pp. 185–86).⁴⁷ The mad should not be denied reading, learning poetry by heart, and practicing sums. Any well-built asylum, Reil proposed, would have a theater, where patients would have "their imaginations strongly excited in a purposeful way; their

43. Ziolkowski suggests some of Reil's and Pinel's similarities in this regard, but he stops there. He holds that Reil had not made one step beyond Pinel in his analyses—a position, of course, from which I completely dissent. See Ziolkowski, *German Romanticism and Its Institutions*, pp. 185–87.

44. Wagner, translator's introduction to Pinel, *Philosophisch-Medicinische Abhandlung über Geistesverirrungen oder Manie*, p. ii.

45. Pinel, *Traité sur l'aliénation mentale, ou la manie*, pp. 64–65.

46. Schrenk indicates the impact of Pinel and Reil on subsequent generations of psychiatric physicians. See Schrenk, "Nach Pinel und Reil," part 3 of his *Über den Umgang mit Geisteskranken*. Kaufmann shows how Reil's considerations reverberated through Prussian social and institutional policy concerning the insane. See especially Kaufmann, *Aufklärung, bürgerliche Selbsterfahrung und die "Erfindung" der Psychiatrie in Deutschland, 1770–1850*, especially pp. 283–85.

47. I am indebted to Cheryce Kramer for pointing this passage out to me.

prudential awareness awakened; contrary passions elicited; fear, terror, amazement, anxiety, and tranquility excited; and the fixed ideas of madness confronted" (*RU*, p. 210).⁴⁸ Reil strongly recommended the use of music, which would speak directly to the heart; for "music quiets the storm of the soul, chases away the cloud of gloom, and for a while dampens the uncontrolled tumult of frenzy" (*RU*, p. 207).⁴⁹ These humanizing measures, of course, stood starkly in contrast to the wretched conditions of the institutionalized insane in much of the world. They also provided the kind of stimuli that a romantic personality would regard as deeply restorative.

Reil also recommended what we would call aversive conditioning and even primitive shock therapy. His descriptive accounts of these latter, which build toward a dissonant crescendo, do enliven one to the eighteenth-century character of the text. For example, withdrawing food or applying hot wax to the body would restore control to the hitherto uncontrollable, without real damage being inflicted. Hysterical mutes, he assured his readers, had been brought to speak by the application of a strong irritant to the soles of their feet. Cold baths seemed therapeutic for the willfully convulsive. To place an unsuspecting madman in a tub of live eels must, Reil thought, rather strongly "work on his emotions through the torturous play of imagination" (*RU*, p. 190). And for those whose attention could not be easily tamed, Reil recommended, as I have already mentioned, the amazing device of the *Katzenclavier*—the piano made from cats.⁵⁰ But, with his own imagination stimulated, Reil went even further. He observed that "the voice of the jackass is even more

48. Kramer discusses in some interesting detail Reil's employment of the theater as a therapeutic tool. See Kramer, "The Psychic Constitution," pp. 34–36.

49. In the last part of his book, Reil discusses the administrative and architectural requirements for an ideal asylum. Among the features he thought necessary for the accomplishment of cure was an auditorium for plays and musical performances; see *RU*, p. 462. When Christian Roller set the plans for the first, purpose-built psychiatric institution in Germany, Illenau in Baden, he followed Reil's recommendation and included a musical theater. Kramer discusses this and other features of the construction of Illenau in her "Illenau, Château de Plaisir" (paper delivered to the Fishbein Workshop in the History of the Human Sciences at the University of Chicago, Chicago, 1994).

50. The term *Katzenclavier*, as used in late eighteenth-century Germany, might be more accurately translated as "cat-clavichord." In this period, the clavichord was an instrument strongly associated with *Empfindsamkeit* (sensibility). I am indebted to Laurence Libin for suggesting the more precise translation of the term. Reil, in his text, says that he recalls having read about the *Katzenclavier* somewhere; see *RU*, p. 205. It was, though, just the sort of tale he might have heard from the musicians at Giebichenstein (see the text below for a description of this salon). Thomas Hankins has briefly traced the history of this amazing instrument, which he supposes was actually constructed (improbable, I think). Gaspar Schott in his *Magiae Universalis Naturae et Artis* (1658) attributed it to the work of his teacher Athanasius Kircher, *Musurgia Universalis* (1650), though Hankins was not able to find it there. Hankins has discovered two other descriptions of the device: one in 1725, by Louis-

heartbreaking." Too bad, he reflected, that even with its small talent the animal yet suffered from "artistic caprice" (*RU*, p. 205).

Reil's *Rhapsodien* marked a new phase in his own intellectual development. The book did not so much abandon the reductive metaphysics of "Von der Lebenskraft" and the Kantian analysis of consciousness of *Fieberhafte Nervenkrankheiten* as raise their perspectives to a new and more finely integrated level, to a heightened plane on which romantic conceptions began to flower. The active and constructive role of self-consciousness became the central principle of the new position. In the previous book on mental illness, Reil considered the insane to have made errors in their understanding of the world. In the *Rhapsodien*, he depicted the deranged as succumbing to more than logical mistakes: their metaphysics had gone bad. Usually because of some psychological trauma, the mad faltered in the dynamic construction and continuous reconstruction of their very selves, with the consequence that their personality crumbled, and external nature, as it emerged from their egos, withered into phantasms.

Reil's new philosophical perspective on the insane occurred in an atmosphere much altered from that which enveloped his previous studies. The very tone of the *Rhapsodien*, its metaphors, examples, and delicious ironies, suffused the work's philosophical and medical considerations with a deeper appreciation of the poetry of life—its beauty and its tragic features, to which Reil's description of the delusional last days of his teacher Goldhagen gave poignant illustration. But it is his generous exercise of romantic irony that has made the work a puzzle to modern readers (and to some of his contemporaries). Typically, prescriptions such as the cat-piano have led these critics simply to dismiss Reil as someone who might himself have benefited from therapy. But this attitude misses the strategic uses to which romantic thinkers put irony. Friedrich Schlegel, the acknowledged leader of the Jena romantics, regarded this trope as the necessary mode of poetically expressing the absolutely required in the face of the relatively attainable. "Irony springs," he proclaimed, "out of the union of an artistic sense of life [*Lebenskunstsin*n] and the scientific spirit [*wissenschaftliches Geist*], out of a collision of the most complete nature philosophy and the most complete aesthetic philosophy." Schlegel thought it "a very good sign when harmonious dullards simply

Bertrand Castel, who understood it as a kind of joke; and the other in an anonymous article in a French journal (1883). See Thomas L. Hankins, "The Ocular Harpsichord of Louis-Bertrand Castel; or, The Instrument That Wasn't," *Osiris*, 2d ser., 9 (1994): 141–43. Libin has discovered a satiric print of some deranged peasants playing on such an instrument (see fig. 1) (personal communication with author, spring 1997). The print comes from Johann Theodor de Bry, *Emblemata Saecularia Mira et Iucunda Uarietate Saeculi Huius Mores Ita Experimentia Ut Sodalitatum Symbolis Insignisue Conscribendis et Depingendis Peraccommoda Sint: Uersibus Latinis, Rhythymisque. Germanicis, Gallicis, Belgicis: Speciali Item Declamatione de Amore Exornata* (Frankfurt am Main, 1596). Reil provides one more citing of this wonderful instrument.

do not know how to take these constant self-parodies; in a vertiginous whirl, they are by turns credulous and incredulous; they take the joke as serious and the serious as a joke."⁵¹ In comparable confusion, Reil's recent critics simply have not noticed the new and marvelous territories into which his thought moved by the end of 1802. In a rhapsodic moment in his book, where he praised efforts at humane treatment of the insane, he more pointedly indicated that larger environment in which his hopes for a better dispensation for the insane now breathed life:

A bold race dares a tremendous idea, which only excites to vertigo men of more common stripe: to eradicate from this globe one of the most disastrous of plagues. And we seem to be entering the vicinity of the harbor. Over all of this, a sublime group of speculative *Naturphilosophen* soars like an eagle. They assimilate their earthly booty into the purest ether and return it again as beautiful poetry. [RU, p. 53]⁵²

The Romantic Movement in Halle

The beautiful poetry to which Reil alluded, he likely heard descanted in the gardens of Johann Friedrich Reichardt, kapellmeister to Friedrich der Grosse and Friedrich Wilhelm II, director and writer of forgettable operas for the Berlin stage, but also the composer who set to sublime music the lyrics of Schiller, Goethe, and many of the romantic poets; the editor of the republican journal *Deutschland*; and the author of five beautiful and talented daughters. Reichardt's estate, Giebichenstein, was located just outside of Halle, and from 1794 until its destruction by Napoleon's troops in 1806 it became the gathering place during the summer for some of the most talented poets, philosophers, and musicians of the period. Schiller, the Schlegels, Novalis, Ludwig Tieck, Jean Paul Richter, Joseph von Eichendorff, and Clemens Brentano all spent a few days to a

51. Friedrich Schlegel, *Kritische Schriften und Fragmente, 1794–1797*, in *Studienausgabe*, ed. Ernst Behler and Hans Eichner, 6 vols. (Paderborn, 1988), 1:248. These fragments were originally published in *Lyceum der schoenen Kuenste* 1, pt. 2 (1797): 133–69, which was edited by J. F. Reichardt and Schlegel.

52. Mocek, in his *Johann Christian Reil (1759–1813)*, expends considerable ink in trying to demonstrate that Reil had not embraced Schelling before 1807, when the doctor conducted research on human pregnancy. Hansen attempts to place the date of his turn to idealism around 1802, which is, I believe, much closer to the mark. Reil seems to have rather abruptly embraced romanticism and Schelling's *Naturphilosophie*. The 1802 book on fevers was based explicitly on Kant's first *Critique*. The *Rhapsodien*—as the above quotation shows, and as the whole theoretical structure of Reil's conception of self-consciousness demonstrates—had achieved a new perspective, one taken from the eagles of *Naturphilosophie*. The *Rhapsodien* was completed 1 January 1803, hence it was likely composed during 1802, maybe as early as 1801.

couple of weeks as guests at the estate. Johann Gottlieb Fichte and Schelling also visited, and during several seasons there Goethe heard his own poetry put to music.⁵³ And from the university itself, select professors made the guest list. In its wild and wonderful gardens—which a friend of Reichardt’s described as “the most beautiful composition of his life and spirit”⁵⁴—the kapellmeister would arrange ravishing musical performances. On a balmy summer evening, Reichardt might take up his violin or sit down at the piano and then, accompanied by other visiting musicians and singers, play a new composition for one of Novalis’s lyrics. And in these performances he was usually joined by his spirited and highly gifted daughters. Frequently, though, the musicians would sequester themselves in some hidden location, so that their songs would seem to waft from the very trees around the garden. The poet Joseph von Eichendorff recalled his own evenings at Giebichenstein:

How completely mysterious appeared much of the garden that Reichardt had laid out at Giebichenstein, as did his striking and beautiful daughters, of whom one composed Goethean songs and another was Steffens’s fiancée. Often on a warm summer evening, there out of the mysteriously obscuring bosquets, as from a distant magic island, songs and sounds of strings would drift over, and how many a young poet there would look in vain through the gates or sit on the garden wall among the budding branches dreaming up wonderfully crafted stories half the night.⁵⁵

Exactly when Reil became a member of this romantic community is difficult to determine, but his scientific reputation, his social standing, his appreciation of the female form, and his own poetizing—anonously published—made him exactly the sort of cultivated intellectual that Reichardt would have eagerly sought out.⁵⁶ Reil must have been an intimate of Giebichenstein’s society by the time he wrote the *Rhapsodien*, for

53. The atmosphere at Giebichenstein is artfully described by Walter Salmen in his *Johann Friedrich Reichardt: Komponist, Schriftsteller, Kapellmeister und Verwaltungsbeamter der Goethezeit* (Freiburg im Breisgau, 1963), pp. 75–147. Goethe recorded his visits to Giebichenstein in his diary. See the entries for 22–24 May 1802, 17–19 July 1802, 6–8 May 1803, and 3 Apr. 1805, *Goethes Tagebücher*, 15 vols. in 16 (Weimar, 1887), 3:57, 60, 72–73, and 111.

54. Wilhelm Dorow, Reichardt’s nephew, quoted in Salmen, *Johann Friedrich Reichardt*, p. 78.

55. Joseph von Eichendorff, “Erlebtes,” in *Joseph von Eichendorff Werke*, ed. Hartwig Schultz, 6 vols. (Frankfurt am Main, 1993), 5:427–28.

56. Reil wrote a screed against corsets, claiming that they artificially and unhealthily distorted the most beautiful form in the animal world. See Reil, “Ueber den nachteiligen Einfluss der Schürbrüste auf Schönheit und Gesundheit,” *Kleine Schriften wissenschaftlichen und gemeinnützigen Inhalts*, pp. 309–16. His poetry appeared anonymously in the journal *Mannigfaltigkeiten* between 1790 and 1800. Several of these verses are reprinted in Engelberg, *Aus dem Leben des Dr. J. C. Reil*.

shortly thereafter he was arranging for Reichardt's son-in-law Steffens to return from Denmark to become a member of the faculty at Halle. Reil seems to have been enjoined by Reichardt to retrieve his daughter Johanna from her exile in Copenhagen, where her husband took her immediately after their marriage in September 1803.⁵⁷ At the same time that Reil wrote Steffens, a known disciple of Schelling, with the invitation to return to Germany, the university also moved to get another individual deeply engaged in the romantic movement, Friedrich Schleiermacher, who had been a student at Halle. Since the theologian's sister was a close friend of Johanna Steffens, and since Henriette Herz, who was warmly attached to Reil (as his own wife nastily observed) and even more heatedly attached to Schleiermacher—well, it seems obvious that social lubrication made it possible to slide Schleiermacher's intellectual qualities more easily before the authorities at the university.⁵⁸ Schleiermacher's abilities, though, hardly needed much of a boost; his divine intellect, as lofted in his *Über die Religion* and *Monologen*, already floated high above the Germans for all to see. Moreover, the competing call he received from Würzburg at the time would have made him even more attractive (according to the calculus still operative at universities). Shortly after his arrival at Halle, Schleiermacher formed a close intellectual alliance with Steffens, Friedrich August Wolf⁵⁹—the great philologist who taught Schleiermacher when he was a student—and Reil. Around them gathered an

57. In his letter to Steffens making the offer, Reil asked him not to mention the negotiations to his father-in-law until the position had been fully secured. Steffens also asked Reil to keep it quiet until it had been approved in Berlin, lest his father-in-law intercede on his behalf. The father's desire for his daughter's return must, however, have been obvious to Reil, else these solicitations of secrecy would not have occurred. See Steffens, *Was ich erlebte: Aus der Erinnerung niedergeschrieben von Henrich Steffens*, 10 vols. (Breslau, 1840), 5:102–4.

58. Ludwig Börne, a student living with the Reils, quoted for the delectation of Henriette Herz a remark by Reil's wife: "Mrs. Reil related that her husband had stayed for a long time in your house, when he followed his curriculum in Berlin. Among other things she said 'Yes, I am certain that were I to die today, my husband would marry the Herz woman tomorrow; he can tolerate her very well'" (Ludwig Börne to Henriette Herz, 8 Oct. 1803, *Briefwechsel des jungen Börne und der Henriette Herz*, ed. Ludwig Geiger [Leipzig, 1905], p. 93).

59. Wolf, who originally studied with Christian Heyne at Göttingen, advanced at Halle his program of *Allertumswissenschaft*. He argued that the texts of the ancients could not really be understood until the historian had mastered the details of everyday life and thought in the ancient world. The historian had to think like an ancient to give the most perspicuous rendering of any text at issue. In 1795 he published the fruits of his program in a book that would achieve considerable fame and notoriety, his *Prolegomena ad Homerum*, which maintained that the Homeric epics were not of unified and single authorship but the work both of troubadours, who improvised on poems that perhaps came from an ancient bard, and of later editors, who shaped the works into unified wholes. For an appreciation of the extent of Wolf's originality, see the lucid essay by Anthony Grafton, "Prolegomena to Friedrich August Wolf," *Defenders of the Text: The Traditions of Scholarship in an Age of Science, 1450–1800* (Cambridge, Mass., 1991), pp. 214–46.

outer circle of students who would take their classes and join with them against the more conservative members of the university.⁶⁰ Under their inspiration, the university became a caldron of youthful enthusiasm for the new philosophy and science. Indeed, the pot often bubbled over: according to one who was a student at the time, two groups of Schelling devotees, while agreeing on matters of polarity, yet clashed over the concept of the “indifference point,” and as a result blood flowed in the city streets.⁶¹ Metaphysics proved a dangerous game. In this exhilarating intellectual atmosphere, Reil could not but be borne aloft with the soaring eagles of the romantic movement.

Reil may well have been carried along with an eaglet of the party, Löb Baruch, a Jewish medical student who would later gain fame, under the name Ludwig Börne, as a writer and journalist of precious, though biting, wit. The sixteen-year-old Börne (as I will refer to him) had originally been sent to Marcus Herz for tutelage in medicine, and in the fall of 1802 he came to reside in the Herz household. But he had other things than medicine on his mind. He spent most of his time mooning over Henriette Herz, his senior by twenty-two years. After Marcus died in January 1803, Henriette decided she had gently to dispose of the lovesick boy, of whom she herself was becoming inordinately fond.⁶² She asked her friend Reil to take him in. Börne eventually sidled away from medicine, but during his four years in Halle he lent an adolescent élan to the Reil household: he kept Reil apprised of his beloved “dear mother” (as Börne took to calling Henriette); he carried himself, in relation to her, as a young Werther; he enthused over Schleiermacher, who conducted his courses “like Socrates” (“DA,” p. 598); he became smitten with Reil’s older, charmingly blond daughter; and though he had an initially rocky

60. See Steffens, *Was ich erlebte*, 5:158. Steffens and Reil became quite fast friends. When Reil moved to Berlin, he promised to help Steffens gain a call to the new university, though his own untimely death prevented this. Steffens’s first encounter with Reil, during an excursion as a student in 1799, undoubtedly was framed by Schelling’s critical analysis of Reil’s materialism. Steffens wrote Schelling of his impressions of the various professors he met: “Shall I describe to you the lamentable, famous philosophers with whom I have spoken on my trip? . . . Reil . . . looks even as insignificant as his philosophy and, if it were possible, speaks more stupidly than he writes” (Steffens to Schelling, 26 July 1799, *F. W. J. Schelling: Briefe und Dokumente*, ed. Horst Fuhrmans, 3 vols. [Bonn, 1962–75], 2:176).

61. Börne, “Die Apostaten des Wissens und die Neophyten des Glaubens” (1828), *Sämtliche Schriften*, ed. Inge and Peter Rippmann, 5 vols. (Düsseldorf, 1977), 1:600; hereafter abbreviated “DA.” The student was Börne; the complete story is related in “DA,” pp. 600–601.

62. The sixteen-year-old knew he had to leave Henriette, but his farewell plunged him into an emotional maelstrom: “I am a man.—You have rendered my sentence: I cannot stay. You pour oil on the flame, and it consumes my heart. I will die if I can no longer remain in your presence” (Börne to Henriette Herz, Mar. 1803, *Briefwechsel des jungen Börne und der Henriette Herz*, p. 57). During his stay with Reil, Börne and Henriette exchanged letters frequently, sometimes almost daily, with both parties complaining when the other was tardy with a missive. Quite clearly Henriette felt deep affection for the boy.

relationship with the doctor, he came to admire this medical researcher who would “begin and intermix his lectures on therapy and diseases of the eye with poetry from Schiller and Goethe, so that the delicious fruits of his research were hidden among flowers” (“DA,” pp. 598–99).

The spring flowers of romanticism, whose seeds had blown over from Jena and Berlin, had taken deep root in Halle. Music, poetry, and literature flourished. On this fecund ground, the university plowed under much traditional academic conservatism and stood ready to cultivate fresh ideas, especially in the disciplines of theology, philosophy, philology, the natural sciences, and medicine. The famous phrenologist Franz Joseph Gall, for instance, came to lecture in 1805, an event that attracted even Goethe from Weimar.⁶³ On that memorable July occasion, with an auditorium filled to overflowing, Gall, surrounded by the skulls of animals and men, gestured to Goethe—or rather to his head—as he illustrated the evenly developed contours of universal genius. The genius, though, must have harbored an enlarged bump for irritation, since he seems not to have been very pleased to become a specimen in Gall’s lecture—such was the judgment of Steffens, who was also in the audience. Gall next turned to Reichardt, seated at Goethe’s left, as he indicated that sublime musical talent would produce bulges in the temporal regions of the skull, which the kapellmeister’s perfectly bald and powdered pate exemplified. Gall then prepared to discuss the organ of language. But before he could even smile towards Wolf, on Goethe’s right, the great philologist took off his glasses and swiveled his head in all directions. “For the moment, he became transmuted into the skull bones turned by the hands of a demonstrator,” or so imagined Steffens.⁶⁴ The behavior broke up the skeptical philosopher, who even in recollection could not suppress his sense of the ridiculous. At the time, though, Steffens felt compelled to counter the nonsense with a set of his own lectures. The next day, in the same room, he began; and Eichendorff, then a student at Halle, thought he completely won over his auditors with the “animated and fiery force of his enthusiasm.”⁶⁵ Steffens did allow, however, that some good effect had come of Gall’s lecture: it determined Reil to begin what eventually became a magnificent series of studies of the brain and nervous system.⁶⁶ These studies would occupy him during a dark time, when the university was shuttered by invading French forces.

63. This episode is related by Steffens in *Was ich erlebte*, 6:48–52.

64. Steffens, *Was ich erlebte*, 6:51.

65. Eichendorff, 16 July 1805, *Tagebücher*, in *Joseph von Eichendorff Werke*, 5:124.

66. See Steffens, *Was ich erlebte*, 6:62. In a review of Gall’s work, Reil testily proclaimed that “Gall understands the structure of the skull as little as that of the brain; he has issued not one single correct remark concerning these structures” (Reil, “Neueste Schriften über Galls Schädellehre,” *Jenaische allgemeine Literatur-Zeitung*, 25 Mar. 1806, p. 565; see also pp. 561–71). Michael Hagner has illuminated the relationship between Gall and Reil in his *Homo cerebrialis*, pp. 160–70.

In the fall of 1806 Napoleon's armies met the Prussian troops just outside Halle. As the citizens gazed out from the city walls onto the Saale valley, they saw the pomp and glory of the German forces wither before the onslaught of the seasoned French companies, whose uniforms were still stained from their recent victory at Jena. During the subsequent occupation, Steffens and his wife had to move in with Schleiermacher, and all had to make room for quartered French officers. Before the battle, Reil was forced to share the great house he had built near Reichardt's at Giebichenstein with the German prince Eugen von Württemberg, and then after the rout Marshall Jean Bernadotte moved in. Reichardt fled the city, since he was implicated in the publication of a book that defamed Napoleon. His magnificent house was razed. Napoleon entered Halle and, because of the threat he perceived in the congregation of young men, he closed the university and scattered its students, who had to return to their homes.⁶⁷

The Romantic Naturphilosoph

During the two years the university remained closed (1806–8) Reil continued to do research, care for patients, and edit his journal, though now with the help of a colleague. In 1807, he published in the *Archiv* a hundred-page monograph that quite unequivocally revealed the transformed state of his thinking.⁶⁸ The article described the results of his investigations of the physiological changes undergone by the human uterus during pregnancy and birth and the relationship of these changes to the rest of female anatomy and physiology. His research included a considerable amount of firsthand observation of pregnant women and experiments conducted on gestating animals. His general conclusions concerning the nature of organic processes transcended those of his "Lebenskraft" monograph. The dynamic metamorphosis of the uterus after conception and its altered relationship to the body of the mother could not, he now asserted, be understood as a merely passive and mechanical process by which the organ simply became stretched out—as if it were a piece of gold hammered thin. The whole structure and its relationships during pregnancy underwent a profound alteration. In particular, the uterus itself became miraculously "transubstantiated": "the

67. The battle at Halle and the occupation are described by Steffens in *Was ich erlebte*, 5:183–227.

68. Reil, "Ueber das polarische Auseinander weichen der ursprünglichen Naturkräfte in der Gebärmutter zur Zeit der Schwangerschaft, und deren Umtauschung zur Zeit der Geburt, als Beytrag zur Physiologie der Schwangerschaft und Geburt," *Archiv für die Physiologie* 7 (1807): 402–501; hereafter abbreviated "UD." Mocek regards this as the first work by Reil to be truly in the "romantic-naturphilosophisch vein" (Mocek, *Johann Christian Reil*, p. 163). Below, I will discuss further and dissent strongly from Mocek's analysis.

hard, white, and structureless substance transmuted into a soft, reddish, vascularly rich, and fibrous one" ("UD," p. 437). These large structural changes proclaimed a singular purpose, quite obviously the production, retention, and nurturing of the fetus. Moreover, at birth, unlike a chick that mechanically broke its shell, the human fetus was transported by the uterus to the outside in a purposeful fashion. All of this, Reil now concluded, "says to us loudly that there is something more fundamental here than dead mechanism" ("UD," p. 409).

Mechanism and chemistry alone now seemed to Reil insufficient to explain the purposeful stages that the pregnant uterus passed through. He was not, however, circling back to Kant. In an extensive footnote, he made clear that the purposive activity of the process hardly became clarified by simply uttering the Kantian slogan that "in organism everything is mutually related as means and ends" ("UD," p. 411n). For, after all, the uterus has purposive relationships extending beyond the mother of which it is a part—its end is the species itself. Moreover, we see during the process of pregnancy and birth a transformation from one organic individual during gestation (that is, the mother and fetus whose interactions seem as one) to the separate existence of two individuals after the birth of the child (see "UD," p. 464). This is but an example, Reil urged, of a larger principle that governs "all organisms on the entire earth, the balance of kinds, of sexes, of origins and extinctions, of epidemics and contagious illnesses, and of hunger and war—a connection that lies over all reality in an unconditioned and all-powerful spiritual region" ("UD," p. 412n).

In his fine-grained and extensive analyses of the pregnant uterus, Reil made considerable use of Schellingian conceptions. For instance, the fundamental phenomenon he wished to investigate—namely, the reversal of polar forces governing the dynamics of the uterus—he conceived in terms drawn directly from *Naturphilosophie*. After conception, the "force of expansion increases in relation to that of contraction." The two forces come to govern opposite poles of the uterus—the body of the uterus now expands (to accommodate the fetus), while the neck of the uterus contracts (to retain the fetus), so that "the axis of the uterus is like a magnetic line with differentiated poles" ("UD," p. 416). As the time of birth draws near, these polar forces begin to reverse, until during birth the contractive power resides in the body of the uterus (to expel the child) and the expansive force opens the passageway for the child to slip out. Were the forces postulated mechanical or vital? Reil argued that during gestation mechanical and vital forces worked in such harmony that one would have to conclude they expressed a more fundamental, underlying power.

Reil employed his Schellingian conceptions to do real work, not to serve as mere decoration. They became woven through the descriptive analyses of the intricate changes in the uterus and mutually related changes in other parts of the female anatomy (for example, the swelling

and engorgement of the breasts). These studies were strikingly detailed and precise and included some exacting experiments.⁶⁹ For instance, strong opinion (for example that of the great Swiss physiologist and poet, Albrecht von Haller) held that birth contractions were due to the muscles of the abdomen and diaphragm. Reil demonstrated that the contractions, on the contrary, were chiefly due to new musculature developed in the uterus itself, which worked in coordination with the fibers of the stomach and diaphragm. He showed this by sacrificing a good many pregnant, near-term rabbits and, after dissection, attaching a galvanic apparatus to their uterus, which would contract violently when a current was passed through it, expelling the babies (see "UD," p 434).

In the concluding two sections of his monograph, Reil sought to expand more generally the framework that allowed him to articulate his study of pregnancy. In "Von der Lebenskraft," he demurred at the concept of a *Bildungstrieb*, since it suggested something intelligent or willful about biological processes. Now he fully embraced the concept, emphasizing just those features that he had before dismissed. "The whole sensible world," he proclaimed, "is its work [that is, that of the *Bildungstrieb*], from the array of stars that stretch from one pole to another through the immeasurable spaces of the universe to the crystal that imbibes water." The *Bildungstrieb* forms every individual as "not only an inclusive totality for itself, but also a member of the universal organism of the world structure, in which the worm is as necessary as Orion." "One does not know," he confessed, "whether one should wonder more at the beauty or the purposiveness of their formation." Both beauty and purpose, he thought, melted together in the artful constructions of nature. The principal difference between the human artist and nature, he urged, was that the human artist took his model from nature and impressed form on recalcitrant material. But "nature, like a Proteus, brings everything from herself; she herself is the material, tool, craftsman, and archetype. Then she breathes spirit into her forms, since they are both one. Pygmalion's beautiful Elise, however, remains without feeling, a mute piece of marble" ("UD," pp. 477-79).

In Reil's monograph, one moves from a surface layer of analysis, in which the phenomena of pregnancy and birth are given an exacting empirical account, to a deeper layer, wherein the phenomena receive a scientific explanation in terms of the *Bildungstrieb*, to the metaphysical foundation, in terms of which the *Bildungstrieb* attains its real significance.

69. The observational and experimental acuteness displayed in Reil's monograph elicited from a hard-nosed professor of medicine in our century—a Dr. Dr. Joachim-Hermann Scharf, who had little patience for Reil's romantic *Naturphilosophie*—the admission that "a modern anatomist and endocrinologist must recognize that this study grounded the entire clinical-gynecological anatomy of the second half of the nineteenth century" (Joachim-Hermann Scharf, "Johann Christian Reil als Anatom," *Nova Acta Leopoldina*, n.s., 20 [1960]: 53; see also pp. 51-97).

At the deepest level, Reil invoked Schelling's Spinozistic absolutism. Every form, he maintained, lay sequestered in absolute substance. This substance was, thus, "the mother of all finite things and insofar as the sensible world as the work of ideas develops out of her, she must carry under cover the idea of the sensible universe, like the seed carries the future plant" ("UD," p. 479). The *Bildungstrieb*, then, as expressed in the "metamorphosis of material is nothing other than a striving of the ideal, which expresses itself in the forms it creates, to become objective and for the objective really to represent what it ideally is" ("UD," p. 491). Right through to his last works, Reil articulated his science explicitly in these Schellingian terms.⁷⁰

Conclusion

In 1808 the university at Halle reopened, but it was like an aged parent who had suffered the ravages of prolonged illness: the body ached with decrepitude and the mental faculties had stiffened up. Steffens, upon his return to Halle, thought the whole experience like coming back after a great fire had reduced all one's possessions to ashes.⁷¹ Little remained among the ruins—social life had disappeared; few students had regathered (about one-quarter of the original number); the university building (which was rented from the city) reeked of desolation; the once-Prussian Halle had been incorporated into the new kingdom of Westphalia, ruled by a puppet king, Napoleon's brother Jerome; and Steffens's family and close friends had scattered. His father-in-law, Reichardt, stayed out of reach of the Corsican; Wolf and Schleiermacher remained in Berlin in anticipation of the opening of a new university. Reil, however, returned, though not for long.

After Napoleon's armies departed the city of Berlin in November 1808, planning began in earnest for a new university, one that would realize the muted desire of the dispossessed Friedrich Wilhelm III to have the state "replace through intellectual force what it has lost in physical force."⁷² The new university would reflect the philosophical dispositions of Kant, Fichte, Schelling, and most especially Wilhelm von Humboldt,

70. For example, in Reil's posthumously published study of general pathology, he explicitly laid out "the system of absolute identity, which has been most purely articulated by Schelling" as the foundation for understanding nature and her aberrations in sickness (Reil, *Entwurf einer allgemeinen Pathologie*, 3 vols. [Halle, 1815–16], 1:13–14; see also pp. 11–95).

71. See Steffens, *Was ich erlebte*, 6:1–2.

72. Quoted in Elinor S. Shaffer's insightful article, "Romantic Philosophy and the Organization of the Disciplines: The Founding of the Humboldt University of Berlin," in *Romanticism and the Sciences*, ed. Andrew Cunningham and Nicholas Jardine (Cambridge, 1990), p. 38; trans. mod.

its chief intellectual architect. Humboldt wished to elevate philosophy and the *Geisteswissenschaften* to a more prominent position in relation to the professional faculties of law, medicine, and theology. He quickly assembled an extraordinary faculty: Fichte and, later, Hegel in philosophy; Wolf and Franz Bopp in philology; Schleiermacher in theology; and in medicine Christoph Wilhelm Hufeland and Reil.⁷³

Reil received his call in 1810 to become dean of the medical faculty; and given the respective prospects of Halle and Berlin, he quickly accepted. In his speech on departing from Halle, he recalled the great changes in science that had occurred just during the time of his own professional life. The direction of those changes, at least in his estimate, was clear:

The period of my present teaching position coincided with a most noteworthy time in which the study of medicine, as well as that of the entire natural sciences, underwent an almost complete revolution. It is unbelievable how far more real is the present instruction than that which I enjoyed. The effort at explanation has made place for living intuition [*lebendigen Anschauung*]; the idea has entered the arena of the mechanical principle; and observation has achieved a standpoint from which to view things in their natural relations. Indeed, the dead have been resurrected to life; the machine of the heavenly bodies has been animated [*vergeistet*]; science has penetrated into the depths of the earth; and natural behaviors are being reduced to laws that are one with the laws of thinking mind [*denkender Geister*]. This revolution has already delivered a great boon, which will grow with the times. This will occur when first the storm of the initial agitation has passed and minds divided are subsequently reunited, so that they will have achieved mutual understanding. Only the German scholars have given birth to this renaissance of science; and without vanity, I might boast that I might count myself among those who, by reason of the various kinds of ideas which they were the first to circulate, have helped to prepare for this upheaval.⁷⁴

The revolution in thought that Reil described was, of course, that wrought by the romantics, especially Schelling. With Schelling “the idea entered the arena of the mechanical principle,” and it was he who reduced the laws of natural activity to those of “thinking mind.” Reil’s claim that he participated in this romantic revolution obviously did not prove a hindrance to his appointment in Berlin. Likely it comported well with the spirit that Humboldt wished to create at his new university.

73. For a discussion of the contrasting ideals of medical education that Hufeland and Reil brought with them to Berlin, see Broman, *The Transformation of German Academic Medicine*, pp. 182–85.

74. Reil, “Abschiedsrede,” *Kleine Schriften wissenschaftlichen und gemeinnützigen Inhalts*, pp. 318–19.

Reil did not long enjoy his new position in Berlin. After Napoleon's catastrophic retreat from Moscow during the fall and early winter of 1812, Prussia broke from its French masters and allied itself with Austria, Russia, and Britain. Friedrich Wilhelm III called upon his people to form voluntary guards. Reil agreed to establish and manage field hospitals, which quickly came into great demand. Through the spring and summer of 1813, battles raged throughout the Germanies, in which the French forces were worn down even in victory. In fall the allies cut off the French at Leipzig. The battle raged for four days (16–19 October 1813), and the slaughter was fierce. In Thomas Hardy's words:

“—Five hundred guns began the affray
On next day morn at nine;
Such mad and mangling cannon-play
Had never torn human line.”⁷⁵

Napoleon's forces were routed and effectively cast out of the Germanies. Some thirty thousand French corpses and only a slightly smaller number of bodies from the side of the allies littered the plains around the city. The wounded and sick, the latter suffering mostly from dysentery and typhus, numbered also some thirty thousand. The casualties were transported to field hospitals, which Reil himself directly managed. He worked unceasingly in those hospitals around Leipzig but finally succumbed to the kind of threat that made the medical profession in those times a heroic undertaking. He contracted typhus. Reil believed he had actually been infected just prior to tending the sick and wounded around Leipzig. Before he left Berlin, he visited an old physician friend, Karl Grappengiesser, who himself had fallen ill with the disease. When Reil walked through the door, Grappengiesser, in his mad delirium, leapt out of bed and flung his arms around his friend. Reil, taken aback, simply uttered: “I have been infected.”⁷⁶ Though believing the embrace fatal, he nonetheless rushed to his duty at Leipzig. When he started feeling ill and thought himself infectious, he made his way to his sister's house in Halle, and there spent his last days. Knowing full well the prognosis, he quickly wrote his family in Berlin. His sister reported to his friend Steffens that only one fear darkly intruded on his otherwise calm state: he believed he might lose his mind as had his friend. But it did not happen. On his last day, extremely weak, he lay on the sofa and, with some lingering pleasure, smoked a pipe. He bade his sister sit by his side. And then, in what became his last request, he asked if she would “place on the table some

75. Thomas Hardy, “Leipzig,” *The Essential Hardy*, ed. Joseph Brodsky (Hopewell, N.J., 1995), pp. 70–71.

76. Steffens, *Johann Christian Reil*, p. 63. Steffens recounts this story from witnesses, pp. 62–63.

beautiful flowers, so that my eye may be pleased, and next to my seat place a goldfinch who can sing well, so that I might hear something pleasant.”⁷⁷ Reil died on 22 November 1813.

In trying to understand Reil’s intellectual trajectory, a significant problem remains, one that has embarrassed older scholars but supplied a puzzle for more recent ones.⁷⁸ It is this: What explains Reil’s transition from a thoroughgoing physiological materialist—whose antivitalistic program outlined in “Von der Lebenskraft” became martial music for many biologists through the nineteenth century—to a romantic *Naturphilosoph*, who reconceived his empirical work in terms drawn from Schelling? Neither group of scholars thinks the transition internally generated—certainly it could not be the product of Reil’s deeper understanding of nature and biological processes.

Among the recent scholars, Reinhardt Mocek has provided an explanation of the transition in two stages. He first maintains that Reil did not adopt any notions of *Naturphilosophie* until the “Gebärmutter” monograph in 1807, during the time when the university was closed by Napoleon.⁷⁹ He then argues that the instantaneous adoption of Schelling’s language occurred *because* of Napoleon’s invasion of Prussia, claiming that Reil decorated the “Gebärmutter” monograph and consequent studies with the trappings of *Naturphilosophie* as an attack against the French, pitting romanticism as the intellectual representation of the German nation against the arrayed armies of the republic. Reil recognized, according to Mocek, “the necessity to mobilize every spiritual means against the Napoleonic domination of Prussia—even that of science.”⁸⁰

Mocek’s hypothesis suffers from several difficulties, not the least of which is that the “Gebärmutter” treatise whispers not a hint of political sentiment. Moreover, even a cursory examination of Reil’s *Rhapsodien* reveals that his theory of consciousness, as well as the tone of the whole study, took wing with the eagles of *Naturphilosophie* at least by late 1802, just shortly after he had dedicated *Fieberhafte Nervenkrankheiten* book to Napoleon and more than three years before the outbreak of war. Moreover, in 1804, after the publication of Reil’s book on the training of physicians (his *Pepinieren zum Unterricht ärztlicher Routiniers*), Andreas Röschlaub, the well-known doctor in Bamberg who had become a disciple of Schelling, wrote his mentor that the famous Reil had become one of them: “Reil has shown in his most recent writing (*Pepinieren, for the Instruction of Medical Routiners*) that he has happily taken over your ideas and has tried

77. *Ibid.*, p. 65.

78. For example, Eulner remarks that one often has to translate Reil’s *naturphilosophische* nomenclature into more common terms; see Eulner, “Johann Christian Reil: Leben und Werk,” p. 29.

79. See Mocek, *Johann Christian Reil*, p. 163.

80. *Ibid.*, p. 168.

to apply them to medicine.”⁸¹ Thus, the evidence that Reil had become well-disposed to Schelling’s thought prior to the outbreak of hostilities with the French is quite patent. And even if we prescind from the question of timing, for Mocek’s hypothesis to work Reil had to have adopted romantic *Naturphilosophie* only for extrinsic reasons. But the “Gebärmutter” work exudes from every pore the fundamental principles of *Naturphilosophie*; Reil certainly did not simply adopt such principles to serve as spiritual armor for the moment, to be removed after the battle. Finally, why would Reil, or anyone, suppose romantic *Naturphilosophie* to be the authentic representative of the German spirit? Rudolph Haym, in his comprehensive survey *Die romantische Schule*, did argue that the early romantic movement represented “the spiritual heritage” of Germany.⁸² But even in 1870, when Haym’s book was published, that was an unconventional notion. It certainly was not a common view in 1807.⁸³ The romantics commanded no spiritual divisions with which to combat Napoleon; they had rather to marshall all of their intellectual forces against their own countrymen.

There is a simpler explanation. Reil became introduced to Schelling’s philosophy undoubtedly by 1797 or 1798, when he would have read Schelling’s *Von der Weltseele*, which contained a sustained critique of the materialism of “Von der Lebenskraft.”⁸⁴ Schelling, like Reil, disputed the need to postulate a separate vital principle in addition to the mechanical and chemical processes governing life. Thus, like Reil, he regarded physical and biological processes as of a piece, a position they both adopted in opposition to Kant. Schelling, however, simply turned the relationship around: he argued that organic principles grounded the physical, that the laws of chemistry derived from higher organic laws. This kind of monism would, upon reflection, have appealed to Reil. After all, he initially rejected Kant’s analysis of biological organisms because of the artificial way

81. Andreas Röschlaub to Schelling, 30 Oct. 1804, *F. W. J. Schelling: Briefe und Dokumente*, 3:132.

82. Rudolf Haym, *Die romantische Schule: Ein Beitrag zur Geschichte des deutschen Geistes* (Berlin, 1870), pp. 4–5.

83. Mocek portrays Steffens as one who claimed that Schelling’s thought represented the true German spirit; see his *Johann Christian Reil (1759–1813)*, pp. 170–71. What Steffens actually said in the article that Mocek cites is: “No writer in Germany has had so decisive an influence on the scientific mind of his fatherland as Schelling. There is hardly a now-living natural researcher (except for the oldest)—including his decided opponents—whose thought has not oscillated, to a greater or lesser degree, to Schelling” (Steffens, “Schellingsche Naturphilosophie” [1805], *Schriften: Alt und Neu*, 2 vols. [Breslau, 1821], 1:85–86). It is quite one thing to say that a figure has had a widespread influence; quite another to contend on that basis that he represents the “spirit” of a nation. In any case, Steffens’s sentiments would have hardly been widely shared, except in the belief that the philosopher had created many negative thought oscillations.

84. See Schelling, *Von der Weltseele*, in *Schellings Werke*, 1:564–75.

in which teleological considerations were secreted into physiological research. Yet certainly as a medical investigator, he met time and again—especially in his studies of pregnancy—the overwhelming and real telic processes that operated therein. The various ways in which a woman's organs teleologically functioned in relationship to each other and to the fetus were amply manifested in the processes of life. Reil displayed no inclination to drag the Creator in to explain such goal-oriented organization, as Blumenbach and Kant surreptitiously did, and Darwin's theory was not yet available to suggest any alternative approach to understanding that teleology. Schelling, however, offered a powerful way of interpreting it. Many other medical and biological researchers found his approach congenial, as did Goethe. Moreover, stuck as he initially was in a kind of Kantian dualism when considering the nature of consciousness and its aberrations, Reil yet looked for ways of conceiving the brain and mind as one. Schelling again offered that means. In the *System des transcendentalen Idealismus*, Schelling demonstrated how the laws of mind became isomorphic with the organic realm, an idea that Reil himself mentioned in his farewell address at Halle.⁸⁵ And of course, Schelling's arguments for idealism were extremely powerful—and, even from our perspective, irrefutable. (What has happened in our time is not that we have demonstrated the falsity of these arguments; rather, we have merely judged them best forgotten.)

The quite substantial intellectual advantages to Reil's research program that derived from romantic *Naturphilosophie* would have been augmented and endorsed in the warm and encouraging environment created during the romantic florescence at Halle, especially in the company he kept at Gebiechenstein. Steffens judged that Reil did not have the sort of unbridled imagination that could give wing to his own poetry.⁸⁶ And in that art he undoubtedly lacked the creative sensitivity of Novalis or Eichendorff. Yet his imagination had the power to pull his empirically grounded reason from the sliced-up brains and uteruses that lay in profusion on his dissecting table, so as to raise his science to new heights and there to observe connections hitherto unknown. Romantic *Naturphilosophie* held a powerful appeal for those whose imaginations exalted in the fresh bright air in which the poets dwelt. Reil breathed in some of that atmosphere, which animated his empirical work sufficiently to inspire a century of medical and biological researchers, even those who might not be disposed to utilize in their practice Reil's wonderful, ironic device, the cat-piano.

85. See my quotation from his farewell address, above. Reil, in his *Entwurf einer allgemeinen Pathologie*, reiterated the identity of life and matter, though with "pure mass as such only the bearer (the framework) for the higher stages of life" (Reil, *Entwurf einer allgemeinen Pathologie*, 1:36).

86. See Steffens, *Johann Christian Reil*, p. 60.